

AN ANALYSIS OF STUDENT PERCEPTIONS CONCERNING  
INSTRUCTOR EFFECTIVENESS AT THE NAVAL  
POSTGRADUATE SCHOOL

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# NAVAL POSTGRADUATE SCHOOL

## Monterey, California



# THESIS

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CONCERNING INSTRUCTOR EFFECTIVENESS  
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by

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Concerning Instructor Effectiveness  
at the Naval Postgraduate School

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## ABSTRACT

The thesis investigates the determinants of effective and ineffective "instructorship" as perceived by students at the Naval Postgraduate School. Through a critical incident survey and subsequent content analysis a scheme which can express student perceptions of effective instructorship was developed. Categorization of good and bad instructorship incidents isolated sixteen factors which were found to be determinants of student perceptions. Examples of verbatim student comments are included in the form of a general feedback vehicle appropriate for instructor consideration.





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## I. INTRODUCTION

As the educational goals of academic institutions become more demanding and time and cost considerations force accelerated programs of learning, increased attention has been focused on the quality of classroom instruction. Attempts to measure the effectiveness of an instructor have placed a heavy emphasis on the solicitation of student opinion. The objective of the research reported here was to distill factors of instructorship which could express student perceptions of effectiveness. A survey of Naval Postgraduate School students conducted in January 1973 provided the data base. This study furthers research initiated by Professors Elster, Githens and Senger at the Naval Postgraduate School in 1972.<sup>1</sup>

Student opinion regarding effectiveness can be useful both as a feedback aid to an instructor seeking to enhance his teaching and as a decision-making tool for administrative faculty review. This research has attempted to categorize student opinion into distinct common denominators of student perception regarding effectiveness or ineffectiveness. The primary thrust has been toward developing a coherent and systematic scheme for addressing perceived instructor effectiveness determinants which could facilitate feedback. Quantification, in terms of rating scales, could eventually be based upon these common denominators.

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<sup>1</sup> R. S. Elster, W. H. Githens, and J. D. Senger, Factors Leading to Satisfaction and Dissatisfaction with Teachers, paper presented at the Western Psychological Association Convention, 1972.



## II. REVIEW OF LITERATURE

A review of the literature relative to faculty evaluation reveals a diversity of methods utilized. Five of the most common procedures used in the evaluation of classroom teaching are discussed by Miller: classroom visitation by a qualified observer, routine monitoring of teaching materials and procedures, observation of special incidents relating to laudatory or negative aspects of an individual's teaching, self evaluation and student evaluation.<sup>2</sup> A study conducted by Gaff and Wilson indicates that student rating is by far the most prevalent of the feasible procedures which have been used to obtain systematic evidence about teaching effectiveness.<sup>3</sup> Miller however, notes that although some institutions of higher learning have experimented with student evaluation of teaching for several decades, numerous officials and professors have just discovered this dimension of evaluation and it has become the "in thing."<sup>4</sup>

A study of the many techniques utilized for student evaluation of teacher effectiveness acquaints the reader with a variety of evaluation forms which their respective authors believe to be the most effective. Few of these reports discuss the research involved in the development of the forms. The reader perceives that the vast majority of the devices are developed through an a priori or intuitive approach. The authors of

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<sup>2</sup> R. I. Miller, Evaluating Faculty Performance (San Francisco: Jossey-Bass, 1965), pp. 26-39.

<sup>3</sup> J. G. Gaff, R. C. Wilson, and others, The Teaching Environment: A Study of Optimum Working Conditions for Effective College Teaching (Berkeley: Center for Research and Development in Higher Education, 1971), p. 290.

<sup>4</sup> Miller, Op. Cit., p. 14.



these forms are professional educators and feel qualified to determine those qualities or factors which should be of primary importance in determining teacher effectiveness. The student evaluating the instructor is thus required to utilize a rating scale for each factor cited. As an example, Renner illustrates a form of this nature in his article, "A Successful Rating Scale."<sup>5</sup> Through repeated use and periodic analysis of data collected, successive refinements and improvements can be implemented in the rating form. It must be noted that these refinements again assume an ability, on the part of the author, to determine what constitutes an improvement. A variation of this technique allows the student to report those additional factors (positive or negative) considered to be of importance by including a free-response section as part of the form. These responses might contribute to a revision of the form if the author finds in them a pattern in consonance with his views. Few rating forms have been oriented toward the student's perception of factors that constitute effective instruction. If student perceptions of instructor effectiveness are of value, logic would dictate that the factors which influence those perceptions should be identified. A definitive study of the factors most important to the student is not available. The primary focus of this research is to that end.

The structure of the instructor evaluation forms used varies considerably although most use items that can be scored with relative ease. Items may be of the multiple-choice descriptive type or graphic type requiring the rater to check along a horizontal continuum. Sometimes the intervals in the graphic type are specific and carefully labeled while in other

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<sup>5</sup> R. R. Renner, "A Successful Rating Scale," Improving College and University Teaching, 15:12-14, 1967.





cases the intervals are left vague. In either instance, the rater may be asked to circle a number or a letter grade or to put a check mark in a box. Frequently a five-point scale is used (with "5" representing "superior" and "1" representing "poor" or "needs improvement"). Some items allow for only a dichotomous response: agree-disagree or yes-no. A few rating forms are entirely open-end, calling for short comments on such matters as instructor's attitudes toward his subject and/or attitude of the students toward him. The following illustrations are extracted from Kent's overview of these diverse devices routinely used for student evaluation of teachers.<sup>6</sup>

A. MULTIPLE CHOICE DESCRIPTIVE

Your opinion of the amount of homework for the course is:

- 1. Superior, proper in amount and emphasis.
- 2. Good, generally supplements work.
- 3. Fair.
- 4. Somewhat inadequate in value and proportion.
- 5. Poor in most respects.

B. GRAPHIC (SPECIFIC)

Range of Interest and Culture

10	9	8	7	6	5	4	3	2	1	0
Instructor has very broad interests and culture; frequently relates course to other fields and to present-day problems.				Instructor has fair breadth of interests and culture; occasionally relates subject to other fields and to present-day problems.			Instructor is narrow in his interests and culture; seldom relates subject to other fields or to present-day problems.			

C. GRAPHIC (VAGUE)

Does he appear sensitive to the students' feelings and problems?

Unaware Responsive

<sup>6</sup> L. Kent, "Student Evaluation of Teaching," The Educational Record, Summer 1966, pp. 384-385.





D. FIVE POINT SCALE

Circle the number most appropriate (5-superior, 1-poor)

Clarity of Speech . . . 5 4 3 2 1 NA

E. PROJECTIVE FORM

Complete the sentences to express your real feeling:

1. This course . . .
2. What I liked . . .
3. I feel that the instructor . . .
4. If I were teaching this course I would . . .
5. The class discussions . . .

F. EXPLANATORY FORM

The student should receive 50 minutes of instruction during each class period. An appropriate story, personal experience, or joke may illustrate or emphasize a point while irrelevant stories and discussion unrelated to the subject waste time. How does the effective use of the period in this subject rank?

The most striking impression obtained from reviewing the literature on evaluating teacher effectiveness is captured by Mitzel:

"Although research has been in progress to this end for more than a half-century, the effort has not yielded meaningful, measurable criteria around which the majority of the nation's educators can rally. No standards exist which are commonly agreed upon as the criteria of teacher effectiveness."<sup>7</sup>

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<sup>7</sup> H. E. Mitzel, "Teacher Effectiveness," Encyclopedia of Educational Research (New York: The Macmillan Co., 1960) p. 148.



### III. CRITICAL INCIDENT METHOD

For the purpose of developing a systematic approach toward resolving the determinants of effective classroom instruction we selected the method of critical incidents coupled with content analysis. The rationale for favoring this method was (1) an appreciation for the comparative objectivity of this approach and (2) the expectation of avoiding the major pitfalls of biased inferences that we suspected of some studies of teacher evaluation.

Two basic approaches to content analysis are discussed by Herzberg et al..<sup>8</sup> The first approach is the a priori approach basing analysis upon a previously defined and outlined schematic system. An example of this approach would be the analysis of a body of material by sorting out factual from evaluative material with all of the material obtained falling into its appropriate predefined category.

The second content analysis approach is an a posteriori method where the categories of analysis are extracted from the material itself. Our study adopted this latter approach to better enable a division into categories that was more meaningful in terms of the empirical material gathered.

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<sup>8</sup> F. Herzberg, B. Mausner, and others, The Motivation to Work (New York: John Wiley and Sons, 1967), p. 37.



#### IV. PROCEDURE

From free written responses to a survey questionnaire we sought to construct categories of instructor characteristics which could express student perceptions of effectiveness and ineffectiveness.

##### A. THE SURVEY

Students at the Naval Postgraduate School were asked to respond to two questions. The first asked them to think of a time when they were especially satisfied with an instructor and to describe what led them to feel that way. The second question was identical, except that it concerned dissatisfaction (see Appendix A). Responses were received from 180 students from a distribution of 1496 questionnaires.

##### B. ANALYSIS

The second step was to sort and categorize the responses, through content analysis, to determine mutually exclusive and nearly exhaustive factors leading to student satisfaction or dissatisfaction with instructors. This development of content categories became the central and most elusive aspect of the effort. On one hand, there was the danger of interpreting or superimposing preconceived ideas into the responses so that the structure and content of the categories could be made coherent. On the other hand, there was difficulty in classifying student perceptions of instructor behavior, attitudes, or efforts into categories which were really different from one another.

##### 1. Isolating Response Thoughts

Before a response could be categorized, or grouped with others which were similar, a conceptual scheme was required to deal with the



language and processes of distinguishing the thought expressed. It became useful to consider an opinion as an expression of a comparison between a situation as it was perceived and an idea about how it ought to have been. Thus the questionnaire prompted the sentiment of satisfaction or dissatisfaction and asked for the "situation-ought" comparison. This conceptualization became useful because it required that the three mutually dependent elements of opinion (1. perceived situation, 2. idea of ought, and, 3. sentiment) be accounted for. We hypothesized that those situations which most frequently conformed to, or deviated from, an idea about what the situation should have been would be most frequently mentioned by the respondents. Similarly, this scheme suggests that a frequency tabulation of instructor effectiveness determinants will yield an order-of-importance listing which has significance only within the context of the situations in which the sentiments were evoked. The mutual dependence of the particular situation and the idea of how it ought to be affects the relative frequency of response about any one factor. Each response is considered to describe a situation in conformity with, or in variance from, an idea about how it ought to be. Our data and analysis then, insofar as they reflect a priority listing of effectiveness determinants, apply to this particular sample. If the situations in the Naval Postgraduate School classrooms, and/or student ideas of what should be were different, the relative order-of-importance listing of effectiveness determinants might also differ.

## 2. Inference

While clarification of the nature of opinion and its component elements helped conceptualize the task and acted as a brake to the tendency to "read into" the responses, a further problem was introduced by the various levels of inferences which were in fact contained in the responses.







On one hand, the students inferred or attributed attitudes, knowledge levels, and outside class effort to instructors. On the other hand, they sometimes inferred the reasons why the described attitudes, perceived knowledge levels, or attributed efforts were important to them. Inferences about the instructor were dealt with directly and incorporated into the categorization scheme. Inference of the second sort, concerned with the reasons why an instructor's attribute was important to the student, consistently associated satisfaction with student understanding. When explicitly stated, competence gain or skill acquired comments were easily classified. A more predominant theme was the implicit statement of, and concern for, comprehension which associated a behavioral or attitudinal characteristic of an instructor with understanding, (e.g., speaking clearly yielded satisfaction because it resulted in comprehension, or speaking in a clear manner yielded comprehension which resulted in satisfaction). In the cases where the expressed sentiment was associated with understanding and some other characteristics, (e.g., speaking clearly, legible penmanship, organized presentation, etc.,) the primary characteristic was recorded. The secondary or associational response concerning "understanding" was noted so frequently (75%) that it was considered a basic common denominator in itself.

### 3. Decision Tree

Once the thought expressed in a response had been distinguished and the level or degree of inference present recognized, the categorization process required that it be explicitly identified. Repeated false starts led us to adopt a consistent procedure for categorization. Rough categories were etched out and refined until a decision tree evolved. In present form, the decision tree subjects each recorded thought of a respondent to a series of binary criteria which attempt to capture the thought.



The categorizer was required to make a binary yes/no decision regarding the match of each thought with each set of criteria in the categorization process. If a match could not be made the thought was rejected and subsequently reviewed.

### C. VALIDATION

A set of instructions was written documenting the decision tree procedure for categorization (see Appendix B). The writers, working independently and following the documented instruction, obtained a 95% agreement on classification. In addition, similar agreement was obtained when a panel composed of the writers and three faculty members employed the procedure.



## V. FINDINGS

The flowchart or decision tree procedure for classification and categorization of student perceptions clarifies the determinants of instructor effectiveness as perceived by students. Sixteen categories have been developed from student responses. The structure of the flowchart or decision tree is simplified by five branchpoints which provide major decision criteria.

### A. RESPONDENTS' UNDERLYING PREMISE

Student concern for understanding the course material is the underlying theme throughout the responses. This concern is expressed explicitly as a determinant of satisfaction (how much was learned), directly as an attribute or category of instructor effectiveness (attitude toward student understanding), and indirectly associated with an attribute of the instructor (I learned because he taught at my level).

### B. BRANCHPOINTS

Descriptive titles or labels were assigned to each of the five branchpoints within the decision tree. These branchpoint labels serve to call to mind the criteria upon which a binary yes/no decision must be made. These are not categories in themselves, but are rather convenient ways of thinking. They are illustrated in Figure 1 and include:

- Instructor Knowledge
- Instructor Attitude Toward (Specific)
- Instructor Classroom Presentation Ability
- Instructor Effort Outside of Class
- Learning Result

#### 1. Instructor Knowledge

Includes student opinion concerning instructor proficiency in subject matter.



FLOWCHART / DECISION TREE OUTLINE ILLUSTRATING BRANCHPOINTS

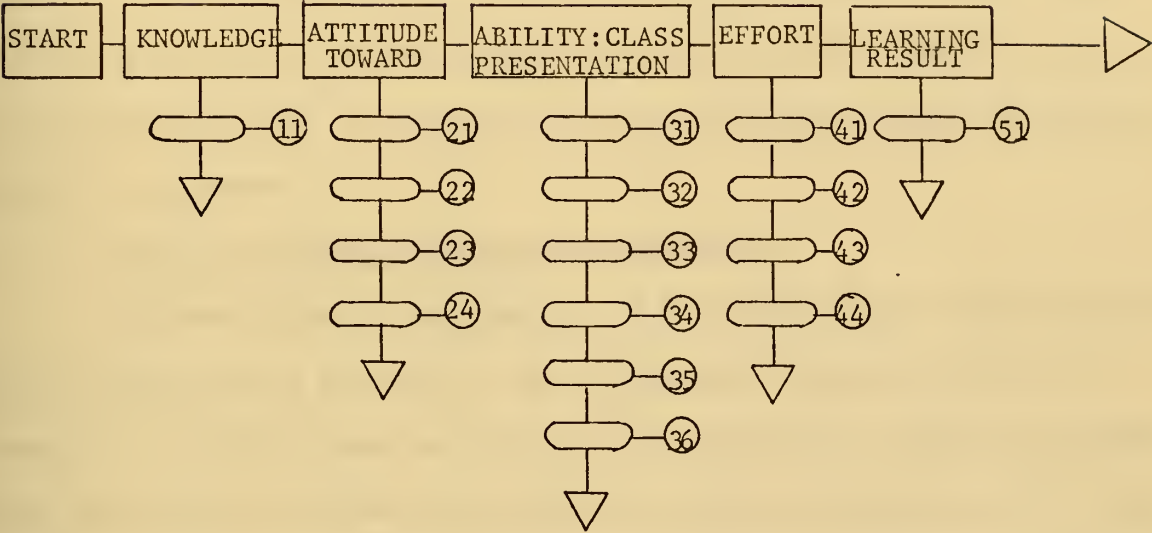


FIGURE 1





## 2. Instructor Attitude Toward

Includes student perceptions of instructor attitudes toward student understanding, the subject matter, student questions, or the student in general. A "yes" decision at this branchpoint is reached only if the attitude described is directed toward one of the above categories, e.g., "He was enthusiastic" is excluded; "He was enthusiastic about the subject matter" is included.

## 3. Instructor Classroom Presentation Ability

Includes student's perceptions of instructor's abilities associated with presentation of material in the classroom. Emphasis here is on instructor activity characteristically associated with classroom presentation, and does not include instructor activities in preparation for classroom presentation, evaluation of students, or other efforts normally made by the instructor outside of the classroom.

## 4. Instructor Effort Outside of Class

Included are student perceptions concerning instructor effort characteristically performed outside of the classroom. Additionally, all comments concerning instructor evaluation of students (e.g., examinations, grades, etc.) and course requirements are included. The "outside of class" or "effort" label is a convenient way of considering classification of a student perception and seems to be distinct from the actual presentation of material in the classroom--at least in the student's mind.

## 5. Learning Result

Includes only comments which specifically associate satisfaction or dissatisfaction with student competence or skill gain. Excluded are comments which associate understanding or learning with an attitude, ability, or effort of the instructor.



## C. CATEGORIES

Although each of the sixteen categories within the decision tree are subordinated to a branchpoint, they are meant to stand alone, outside of the context of the branchpoints which were used as a convenience when categorizing. The complete flowchart/decision tree is illustrated in Figure 2. Categories are discussed below in order of significance or frequency found in the survey.

### 1. Organization of the Course

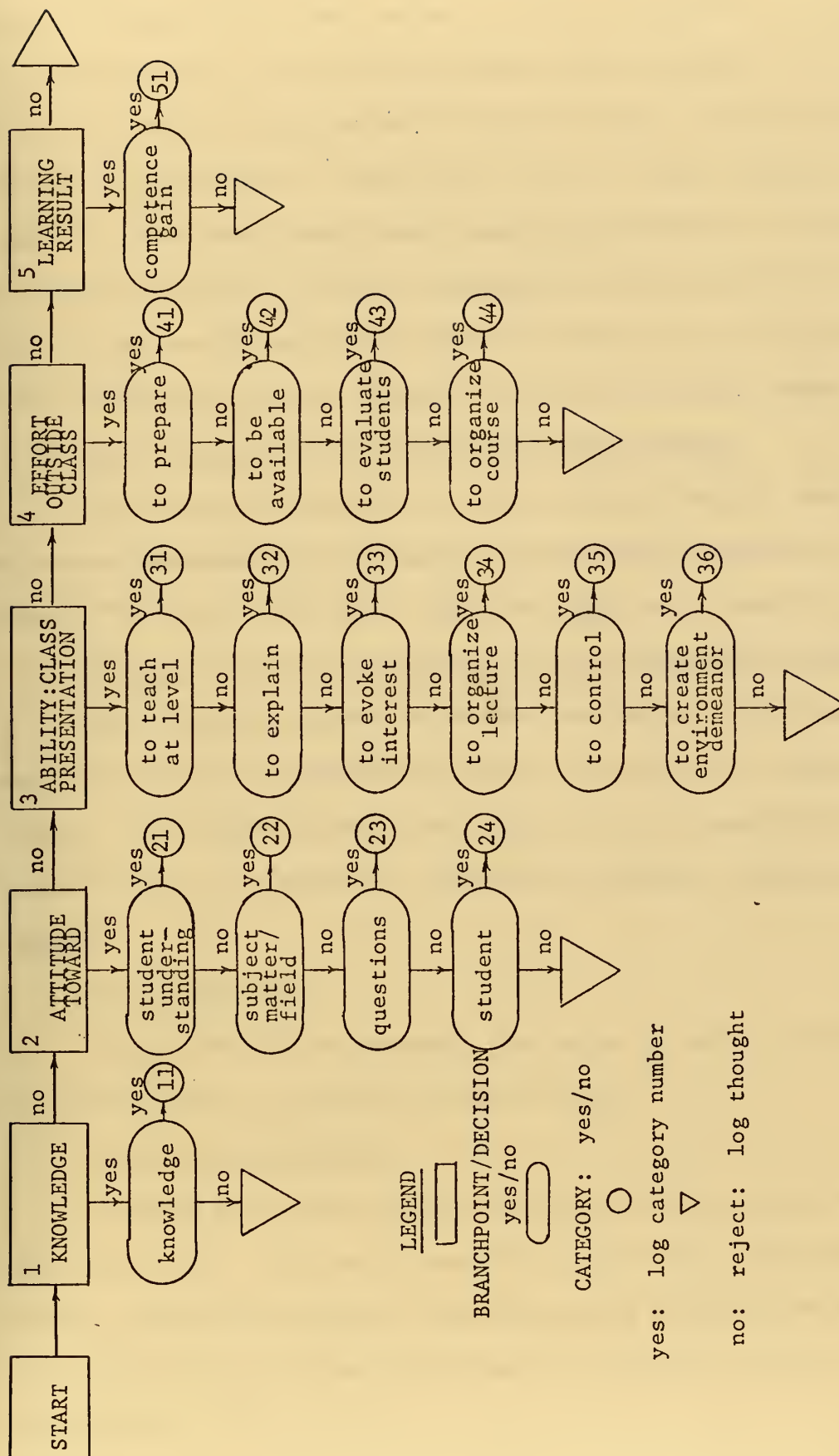
This category encompasses the orientation of the course toward clear objectives. Included are the perceived clarity of course requirements, studies to reach the objectives and relevance of the course to larger programs of study or "real world" situations. Separation of important from less-important material and a balance between theory and the practical were important factors. In this category the direction of the course as a whole, in terms of how it actually proceeds, is central, e.g., "We always drifted from topic to topic, without any idea of where we were going or why."

### 2. Evaluation of Students

Every aspect of grade assignment is included in this category. Its position as second most frequently mentioned is dependent upon incorporating all aspects into one category. To distinguish the significance of component factors included, subcategories were constructed from those responses which indicated "evaluation of students" as a factor in perceived effectiveness. The subcategories included:

- Content of examinations
- Fairness in grading examinations
- "Taxingness" of assignments
- Grading scheme or pressure on grades
- Promptness in returning examinations
- Actually reading assignments submitted





DECISION TREE / FLOWCHART

FIGURE 2





These subcategories were then ranked in order of frequency mentioned with the other categories. With one exception, each subcategory ranked below all other factors of satisfaction or dissatisfaction. The exception, "content of examinations," ranked tenth among all other categories and seemed to be the predominant issue concerning evaluation of students. The negative correlation between examination content and material covered in the course was frequently mentioned by students, e.g., "The content of his examinations did not resemble the material we had covered in class."

### 3. Instructor Attitude Toward Student Understanding

This category reflects instructor concern, interest, desire, etc. for student comprehension or progress. One extreme is reflected in the comment, "He doesn't just cover topics, he wants us to learn the material."

### 4. Instructor Ability to Create a Learning Environment and Demeanor

This category captured the elusive qualities of enthusiasm, personality, honesty, open-mindedness as well as abilities to inspire or motivate. The authors suspect that the ability to be appealing is probably the most difficult to address or influence, especially through student feedback.

### 5. Prior Preparation

Student perceptions regarding the degree of prior preparation for a classroom period are included in this category.

### 6. Clarity of Explanation

Comments concerning an instructor's ability to clearly explain were categorized here. Vivid use of examples, clarity when presenting difficult material, and direct responses to questions were frequently noted responses, e.g., "His clarity (of presentation) made the difficult material as easy as possible."





#### 7. Instructor Knowledge

This category includes depth and breadth of instructor proficiency in the course material. A frequent negative comment was, "He couldn't work homework problems on the board."

#### 8. Instructor Ability to Teach at Appropriate Level

This category includes comments concerning instructor awareness of student level of comprehension, and adjustment of the pace and level of instruction appropriate to student ability and prior knowledge, e.g., "He taught over our heads and was unaware that no one understood what was going on."

#### 9. Instructor Attitude Toward Course and Subject Matter

Included are comments concerning instructor interest in and respect for the subject matter. Opposites in this category are "He was interested in the field" and "He said the course was useless."

#### 10. Organization of Lecture Material

The structure, logic, and sequence of material presented in class is included in this category. Summarizing, providing an overview, emphasizing the significant in a logical sequence, and "being flexible, without getting lost" are frequently-noted positive characteristics.

#### 11. Instructor Attitude Toward the Student

This category refers to comments concerning instructor-student interrelationships in which the student discerns an attitude specifically toward him as a person (e.g., aloofness, patience, encouragement). Not included are either more specific instructor attitudes toward student understanding and questions or more general personality traits (honesty) or characteristics ("appealingness").

#### 12. Student Competence Gain

Only direct comments which associate satisfaction or dissatisfaction



with amount learned are included. "I was satisfied because I learned a lot" or "I was dissatisfied because I didn't learn anything and the whole thing was a waste of time." As previously noted, student concern for their understanding was implicit in a large majority of the responses.

13. Instructor Attitude Toward Student Questions

Expressions of instructor willingness to listen to and answer questions in addition to student perceptions of instructor concern for the content of student understanding are included in this category. Typically, "He wants students to understand concepts not just mechanics," and "Never-mind-how-it-works-just-plug-in-the-numbers type attitude."

14. Instructor Ability to Control Class and Time

Comments concerning effective use of class time and class participation are categorized here.

15. Instructor Availability

Comments concerning outside class availability to lend assistance to students are included, e.g., "He was always available for outside assistance."

16. Instructor Ability to Evoke Interest

The instructor's ability to evoke interest is contrasted to, "He reads from the text," in this category.

D. INTERPRETATION AND TABULATION

Our findings suggest that the defined categories and procedural method of categorization can express student perceptions of instructor effectiveness in the vocabularies and within the frame of reference of students at the Naval Postgraduate School. The rankings of the categories in order of importance reflects a moment in time and a particular sample. It is our hypothesis that at a different moment of time or by using a different



sample the categories would stand while their order of ranking (according to their frequency) might be different. Table I presents the tabulated frequency of responses found in the January 1973 sample. In our estimation it would be erroneous to conclude from this tabulation that students are more satisfied than dissatisfied with instruction on the basis of positive or negative responses to the summation of particular categories. Similarly, it does not appear as if any of the categories represent satisfaction significantly more than dissatisfaction, or vice versa. On the other hand, it may be that instructor emphasis on categories toward the higher end of the ranking could more quickly and effectively lead to improved effectiveness as perceived by students.

Another perspective of the ranking order of categories can be gained if they are considered in light of either prescriptions or proscriptions for action. In this case two observations are suggested.

1. Evaluation of Students

If student evaluation or "grades" play such a dominant part in student perception, one questions what it is, in particular, that plays that vital part. Additionally, one questions how those factors related to student evaluation compare with the other categories. These findings indicate, as previously noted, that content of examinations is the central issue. Rearrangement of the frequency tabulation to account for the subcategories or influences detected within student evaluation yields the rankings in Table 2. Evaluation of students in Table 2 is broken into six subcategories and ranked with the other fifteen categories. Examination content then ranks tenth, while other facets of student evaluation are found in positions 17 through 21.





# ORDER-OF-IMPORTANCE CATEGORY LISTING AND FREQUENCY TABULATION

TABLE I

Rank Order	Category Description	Total # Mentioned	# of Associations with Satisfaction	# of Associations with Dissatisfaction
1	Course Organization	153	77	76
2	Evaluation of Student	139	60	79
3	Attitude Toward Student Understanding	112	63	49
4	Ability to Create Learning Environment	111	60	51
5	Instructor Preparation	106	46	60
6	Ability to Explain	100	60	40
7	Instructor Knowledge	97	52	45
8	Ability to Teach at Appropriate Level	72	41	31
9	Instructor Attitude Toward Course	68	40	28
10	Lecture Organization	62	28	34
11	Attitude Toward Student	58	34	24
12	Attitude Toward Questions	49	24	25
13	Student Learning Result	35	19	16
14	Instructor Control	34	12	22
15	Instructor Availability	30	23	7
16	Ability to Evoke Interest	29	14	15
	TOTALS	1255	653	602





## 2. Distinctions

The development of the categories was an attempt to express determinants of instructor effectiveness as perceived by students. The effort has sought to make distinctions between the categories clear, distinct and mutually exclusive. The method has not been able to satisfactorily address the degree to which the categories are statistically different. The constructs of language and multiple phrases which can express the same thought may have led us to construct categories which seem to be different, but which may not be. The overwhelming emphasis on "organization" is the predominant instance.

Comments concerning organization seemed to refer to either the course in general or to the lecture presentation. Organization of lectures was sometimes attributed to preparation, in which case it was categorized separately. Classifying course organization, organization of lectures, and preparation into one category would have been, in our minds, an inference. Although instructors themselves may equate the prior preparation of a lecture with an organized presentation, the categories have not been constructed as if the same cause-effect correlation is made by the student. The language of our branchpoints (instructor effort and instructor ability) kept this distinction. Thus, comments to be classified under preparation were recognized by the word "prepare" whereas comments categorized under lecture organization referred to either the results of that preparation before ("His lectures were organized") or after ("His lectures were presented in an organized fashion") presentation. If these three categories are considered one, comments concerning organization account for 25% (312) of the responses.



#### E. COMPARISON WITH A SIMILAR STUDY

As this study drew to a close, a study by W. W. Ronan reporting a similar critical incident study became available.<sup>9</sup> In comparison, the results of that study delineated seven subdivisions or types of instructor behavior (roughly analogous to our six branchpoints) and ninety-seven specific behaviors or actions associated with satisfaction or dissatisfaction (roughly analogous to our sixteen categories). The essential difference between the results reported herein and those found in the Ronan study is our concentration on student perceptions versus an exclusive concentration on specific instructor actions.

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<sup>9</sup> U. S. Department of H. E. W./Office of Education, PREP Report No. 34, Evaluating College Classroom Teaching Effectiveness, by W. W. Ronan.



ORDER-OF-IMPORTANCE CATEGORY LISTING AND FREQUENCY TABULATION  
SUBCATEGORIZING FACTORS IN STUDENT EVALUATION

TABLE 2

Rank Order	Category Description	Total # Mentioned	# of Associations with Satisfaction	# of Associations with Dissatisfaction
1	Course Organization	153	77	76
2	Attitude Toward Student Understanding	112	63	49
3	Ability to Create Learning Environment	111	60	51
4	Instructor Preparation	106	46	60
5	Ability to Explain	100	60	40
6	Instructor Knowledge	97	52	45
7	Ability to Teach at Appropriate Level	72	41	31
8	Instructor Attitude Toward Course	68	40	28
9	Lecture Organization	62	28	34
10	Examination Content	61	22	39
11	Attitude Toward Student	58	34	24
12	Attitude Toward Questions	49	24	25
13	Student Learning Result	35	19	16
14	Instructor Control	34	12	22
15	Instructor Availability	30	23	7
16	Ability to Evoke Interest	29	14	15
17	Fairness in Grading Examinations	28	12	16
18	Taxingness of Course	21	10	11
19	Grading Scheme	17	10	7
20	Promptness Returning Examinations	11	5	6
21	Attention to Submitted Work	2	1	1
	TOTALS	1255	653	602



## VI. APPLICATIONS

Two applications of the findings to enhance feedback to instructors are suggested.

### A. GENERAL FEEDBACK

The development of a document which could make available the comments of students recorded during the survey in the format of the developed categories might prove of some value to instructors seeking to enhance their effectiveness. To this end a general description of our efforts and verbatim comments classified according to developed categories has been composed and is included as Appendix C. In addition, this appendix provides documentation for the classification procedure described earlier.

### B. SPECIFIC ROUTINE FEEDBACK

A vehicle and a procedure which could be routinely employed to gather student perceptions or opinions of instructor effectiveness could be based on the categories distilled from this effort. Development of suitable scales awaits future efforts.





## APPENDIX A

### SURVEY QUESTIONNAIRE

The instructor can make or break the course. Student opinion too often travels via the grapevine of acquaintances instead of back to the instructor or to those making administrative decisions. If student evaluation is to be significant, the determinants of student evaluation must be clarified. This questionnaire seeks to clarify what should be evaluated or measured about an instructor's performance from the perspective of the NPS student.

Your comments on page two will assist in this endeavor. Identification of instructors by name is specifically NOT solicited. Please leave the completed questionnaire in the "instructor questionnaire" box in the Student Mail Center.

This questionnaire is distributed IAW NPS INST. 1520.13 by students fulfilling the requirements for MN 0810, Thesis Research, under the direction of Professor R. S. Elster.

Thank you for your assistance.



Curriculum \_\_\_\_\_

Qtrs Completed at NPS \_\_\_\_\_

QPR Overall \_\_\_\_\_

Yrs Military Service \_\_\_\_\_

Think of a time when you were particularly satisfied with an instructor.  
What led up to this feeling?

Think of a time when you were not satisfied with an instructor. What  
led up to this feeling?



## APPENDIX B

### INSTRUCTIONS FOR CATEGORIZING STUDENT RESPONSES TO CRITICAL INCIDENT QUESTIONNAIRES CONCERNING INSTRUCTION EFFECTIVENESS

#### I. INTRODUCTION

Questionnaires soliciting student opinions concerning the factors of instructor effectiveness at the Naval Postgraduate School require processing. Each returned questionnaire contains free-written responses which indicate factors important to the respondent. The task is to identify like factors and group them into categories.

The categorization process involves two steps: first, distinguishing the thoughts within the response, and second, categorizing the distinguished thoughts into categories containing similar thoughts. Certain concepts and procedures assist in this process.

#### II. ISOLATING THE THOUGHT

Conceptual clarification of the nature of the student responses can be helpful. Students have recorded their opinions regarding positive and negative aspects of instructor effectiveness. These opinions consist of three elements, some or all of which may be present in any given response. When seeking an opinion, a response indicating like or dislike, in itself, is considered to be a comparison between the situation called to mind and the sentiment evoked. If the reason for the sentiment is explained, that explanation or elaboration makes a comparison between the situation as it is perceived and an idea about how it should have been. To a large extent, the responses, and hence the categories into which they are classified,



represent variances from, or conformity with, ideas about "how things should be."

Each categorizer must consciously avoid reading his own thoughts or past experiences into responses. The responses must be taken at their face value and not interpreted to represent thoughts consistent with the experience or bias of the categorizer. This is more easily said than done. It is the individual thoughts that must be categorized, not the general gist of the response.

### III. CATEGORIZATION OF THE THOUGHT

The categorization procedure involves processing each distinguished thought (which may be a phrase, a sentence, or a paragraph) through a flowchart which has five branchpoints and sixteen categories. At each branchpoint and each category a binary yes/no decision is required to determine the next path or appropriate action. Each decision is based on criteria within the decision box. If the criteria within the decision box "capture" the thought being processed, follow the "yes" path. If not, follow the "no" path. Each thought is allowed one pass through the flowchart; if uncaptured it ends in a reject box and is logged accordingly. Branchpoints have the one-digit numbers one through five. Categories have two digit numbers. Each category is subordinate to one branchpoint, although two of the five branchpoints have only one category (1 has 11, and 5 has 51).

Each branchpoint and category is described by a set of criteria upon which the yes/no decision is based. In addition to the criteria and a number, each also has a word or name which serves the function of calling the criteria to mind.





The branchpoints are not categories; they merely assist in making the correct decision based on the criteria they contain. Again, the names serve to call the criteria to mind. The branchpoints are numbered and labeled as:

- 1 Instructor Knowledge
- 2 Instructor Attitude Toward
- 3 Instructor Classroom Presentation Ability
- 4 Instructor Effort Outside Class
- 5 Student Learning Result

A condensed version of the flowchart is presented in Figure A-1.

Each thought is processed through the flowchart until it is either captured by the criteria of a category or is rejected. Once captured, the corresponding number of the category is logged on a three-by-five inch card sequentially numbered to correspond with each questionnaire. Figures A-2 and A-3 illustrate the format. The category numbers of thoughts associated with satisfaction (the top half of the questionnaire) are logged on the left half of the card; those associated with dissatisfaction (the bottom half), on the right. If a thought is rejected, the response is logged verbatim on the reverse side of the card.

Figure A-4 displays the entire flowchart/decision tree and includes category labels. The addendum includes the criteria which these labels represent and examples of thoughts included and excluded in each category. As a procedural method, the addendum should be disassembled and organized into a single chart. Figure A-4 will then serve as a condensed mapping reference. Prior familiarity with the criteria is essential and organization into a single diagram facilitates categorization.

To summarize, the categorizer has before him sequentially numbered survey questionnaires, correspondingly numbered cards, a schematic representation of the flowchart, and Figure A-4. Thoughts expressed in the questionnaires are processed through the flowchart. The number of the



FLOWCHART / DECISION TREE OUTLINE ILLUSTRATING BRANCHPOINTS

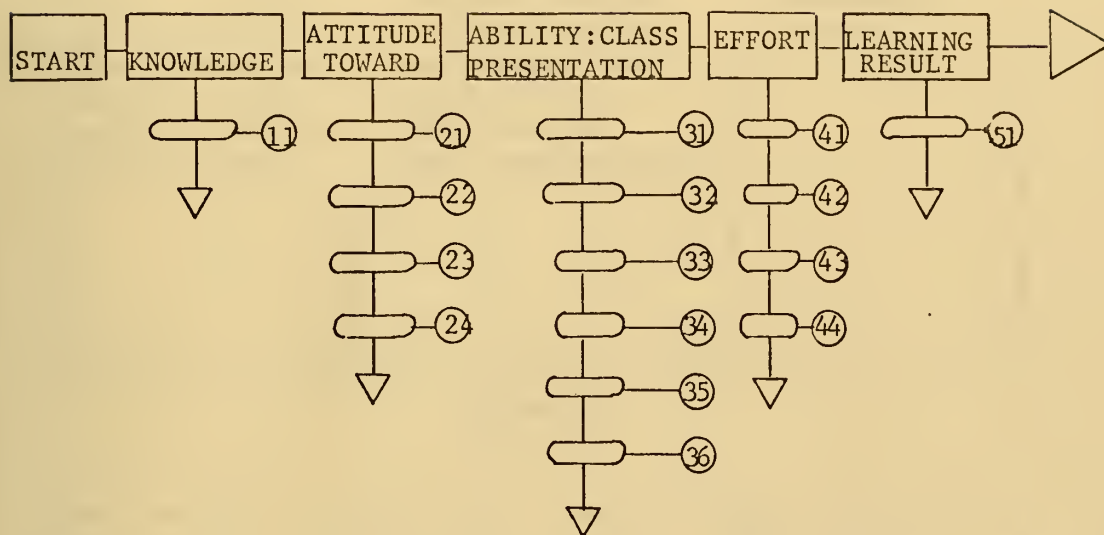


FIGURE A-1



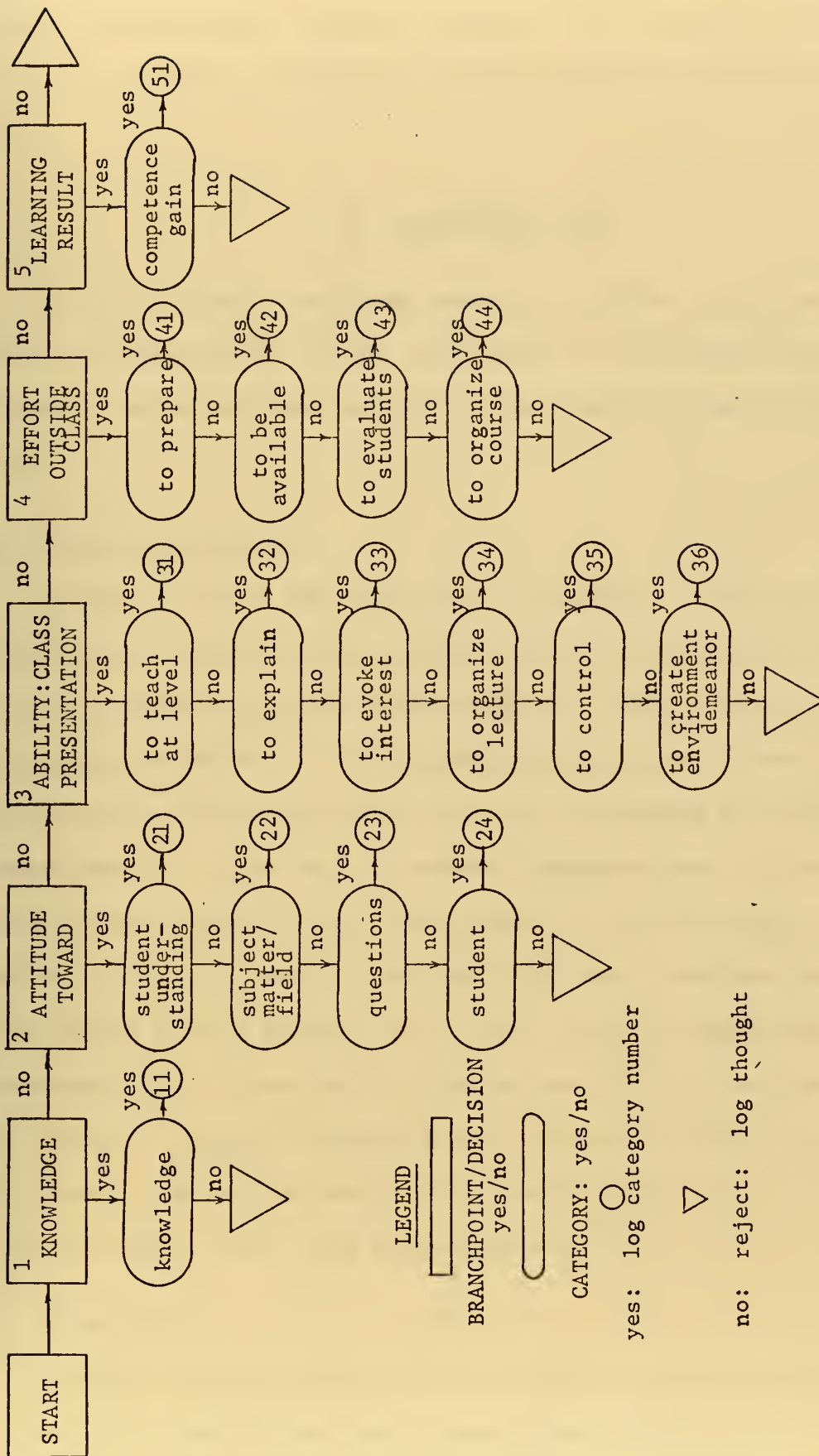
Category numbers corresponding to the thoughts expressed in the top half of this questionnaire.	Category numbers corresponding to the thoughts expressed in the lower half of this questionnaire.	Sequential number
---	---	-------------------

Figure A-2

21 33 11 24 51	31 46 43	087
----------------------------	----------------	-----

Figure A-3





DECISION TREE / FLOWCHART

FIGURE A-4





category capturing each thought is logged on the appropriate half of the card. If a thought is rejected, it is recorded on the back side of the card.

#### IV. CONCEPTUAL AIDS

Initial difficulty recording comments concerning "organization" and "student understanding" can be anticipated. Distinctions between comments addressing either of these subjects follow specific rules within the flow-chart.

##### A. STUDENT UNDERSTANDING

Underlying many of the responses is the implicit expression of the student's idea that he ought to learn and that the instructor ought to teach in a manner such that learning results. These kinds of thoughts are handled in two ways. If the thought directly, and without qualification or association with an instructor attribute, expresses satisfaction or dissatisfaction on the basis of student competence gain, it is categorized under "Learning Result" (51). For example, "I was satisfied because I learned the subject material" or "The course was a complete waste of time and I didn't learn a thing." On the other hand, if understanding is addressed in the context of, or is associated with, an instructor attribute, the thought is logged according to the attribute with which it is associated. For example, "He was concerned with my understanding" (21) or "His explanations were clear and I could understand them" (32).

##### B. ORGANIZATION

A second predominant theme in the responses concerns organization. The decision tree distinguishes between three closely related concepts.



The first distinction rests between the organization of the course (44) and the organization of the lecture (34). While the distinction seems clear enough, course organization is a broader concept and includes general comments about organization (e.g., "He was disorganized."). More specific comments may refer to either the course as a whole or the classroom presentation of the material. A second distinction rests between preparation (41) and lecture organization (34). The category including preparation is almost always recognized by the word "prepare." Lecture organization, on the other hand, denotes both the results of preparation ("His lectures were organized") and the results of presentation ("He presented the material in an organized manner."). Although it seems logical to infer that preparation results in an organized lecture presentation, it is an inference nevertheless. To the greatest extent possible the categorization procedure seeks to avoid inferences on the part of the categorizer.

#### V. LOGGING RULES

When recording the numbers of categorizers which have captured thoughts, any given category number may be recorded only once for the positive and once for the negative expression in any one response. Thus, if the same thought is expressed in several sentences it is recorded only once vice once for each sentence. In those instances when the respondent has indicated "the converse of the above" on the bottom half of the questionnaire, each category number recorded on the left side of the card is also logged on the right. Several practice runs through the procedure, adhering to the yes/no decision at each point in the flowchart, are recommended.



ADDENDUM I TO APPENDIX B

FLOWCHART BRANCHPOINT AND CATEGORY DECISION

CRITERIA



START HERE

INSTRUCTION  
Go to page 2





Branchpoint label: KNOWLEDGE (1)

Subordinate Categories: Instructor Knowledge (11)

Criteria: Instructor knowledge of the subject he is teaching  
Knowledge in his field  
Includes depth and breadth of knowledge  
Demonstrated proficiency in subject matter

Examples: "He was knowledgeable in his field."  
"He couldn't work homework problems on the board."  
"He was unable to relate the subject matter to the real world."

This category does not include statements such as  
"He did not relate the subject matter to the real world." or  
"He did not work homework problems on the board."

INSTRUCTION/DECISION

"YES" go to page 3

"NO" go to page 4



Category: INSTRUCTOR KNOWLEDGE (11)

Superior branchpoint: KNOWLEDGE (1)

Criteria: The criteria for this category are the same as the criteria for the branchpoint. Has the thought been captured?

INSTRUCTION/DECISION  
"YES" log category 11  
"NO" reject



Branchpoint label: ATTITUDE TOWARD (2)

Subordinate categories: Student understanding/teaching (21)  
Subject matter/field (22)  
Student Questions (23)  
Students (24)

Criteria: Attitudes, but must be directed toward one of the subordinate categories.

Words which help identify attitudes include enthusiasm for, interest in, concern for, willingness to, involvement in, desire to, and wants.

Examples: "He was encouraging" YES  
"He was enthusiastic" NO  
"He was enthusiastic about the subject" YES  
"He really wants to teach" YES  
"He was aware of . . ." NO  
"He adjusted the pace" NO  
"He adjusted the pace because he really wanted us to understand" YES  
"He cares about what we learn" YES

INSTRUCTION/DECISION

"YES" go to page 5

"NO" go to page 9



Category: STUDENT UNDERSTANDING (21)

Superior branchpoint: Attitude toward (2)

Criteria: Attitude toward student progress  
Attitude toward teaching  
Attitude toward student comprehension of material

Examples: "He doesn't just cover topics, he wants us to learn the material."

INSTRUCTION/DECISION  
"YES" log category 21  
"NO" go to page 6





Category: SUBJECT MATTER/FIELD (22)

Superior branchpoint: Attitude toward (2)

Criteria: Interest in the field  
Respect for the field  
Attitude toward course material

Examples: "He said the course was useless."  
"He was interested in the field."

INSTRUCTION/DECISION  
"YES" log category 22  
"NO" go to page 7



Category: STUDENT QUESTIONS (23)

Superior branchpoint: Attitude toward (2)

Criteria: Willingness to listen to and answer student questions  
Concern for the content of student understanding

Examples: "He is offended by questions."  
"He wants students to understand concepts not just mechanics."  
"Never-mind-how-it-works-just-plug-in-the-numbers type attitude."

Not included in this category are comments such as  
"He teaches concepts not just mechanics."

INSTRUCTION/DECISION  
"YES" log category 23  
"NO" go to page 8



Category: STUDENT (24)

Superior branchpoint: Attitude toward (2)

Criteria: His manner in relation to students, but not his manner in general.  
Implies a specific trait in relation to students.

Examples: "He is aloof."  
"He is encouraging."  
"He is patient."  
"He has a superior attitude."

But not,  
"He has a good personality."  
"He has colorful speech."  
"He is a good showman."  
"He is enthusiastic."  
"He is honest."  
"He was appealing."

Comments such as "He was inspiring" do not belong in this category.  
"He made me want to learn" is thought of as an ability vice an attitude of the instructor and is subordinated to branchpoint 3.

INSTRUCTION/DECISION  
"YES" log category 24  
"NO" reject



Branchpoint label: CLASSROOM PRESENTATION ABILITY (3)

Subordinate Categories: To teach at appropriate level (31)  
To explain (32)  
To evoke interest (33)  
To organize lecture (34)  
To control time/participation (35)  
To create a learning environment and demeanor (36)

Criteria: Characteristic of material presentation in the classroom during  
a class period  
Abilities or attributes

Examples: "He adjusted the pace."  
"He read from the text."  
"He was enthusiastic."  
"His board work was neat and legible."  
"He is aware of the degree of class understanding."  
"He puts material across."  
"He made me want to learn."  
"He was narrowminded."  
"He speaks well."  
"He is colorful."  
"His lectures were presented in an organized manner."  
"His lectures were organized."

Not included in this category are comments reflecting preparing for lectures, organizing the course, and evaluating the student. Although the student may observe these in the classroom they are thought of as characteristic activities of the instructor outside of class. Examples are "He was organized." (see 44) and "He was prepared." (see 41).

INSTRUCTION/DECISION

"YES" go to page 10

"NO" go to page 16





Category: TO TEACH AT APPROPRIATE LEVEL (31)

Superior branchpoint: Classroom presentation ability (3)

Criteria: Teach at the level of student knowledge  
Teach at the level of student ability  
To be aware of student comprehension

Examples: "He used layman's terms."  
"He could adjust the pace."  
"Just right as far as challenge goes."

INSTRUCTION/DECISION  
"YES" log category 31  
"NO" go to page 11



Category: TO EXPLAIN (32)

Superior branchpoint: Classroom presentation ability (3)

Criteria: Clarity of explanation  
Good imparter of knowledge  
Ability to answer questions  
To use examples to clarify  
To make material understandable

INSTRUCTION/DECISION  
"YES" log category 32  
"NO" go to page 12



Category: TO BE INTERESTING (33)

Superior branchpoint: Classroom presentation ability (3)

Criteria: To evoke interest  
To make material interesting

Examples: The most frequent negative comment in this category is  
"He reads from the text."

INSTRUCTION/DECISION  
"YES" log category 33  
"NO" go to page 13



Category: TO ORGANIZE LECTURE MATERIAL (34)  
TO PRESENT MATERIAL IN AN ORGANIZED MANNER

Superior branchpoint: Classroom presentation ability (3)

Criteria: Structure, sequence, and "logicalness" of material presented  
during a lecture  
Pointing to significant points in a lecture  
Summarizing, overviewing, emphasizing  
Being flexible, without getting lost

Examples: Does not include organization or composition of the course  
Not to be confused with preparedness, which may or may not  
result in an organized presentation  
Not to be confused with more general comments about organization  
such as "He was organized."

INSTRUCTION/DECISION  
"YES" log category 34  
"NO" go to page 14





Category: TO CONTROL TIME/PARTICIPATION (35)

Superior branchpoint: Classroom presentation ability (3)

Criteria: Effective use of class participation  
Effective use of class time  
Control of direction and content of classroom instruction

INSTRUCTION/DECISION  
"YES" log category 35  
"NO" go to page 15



Category: TO CREATE LEARNING ENVIRONMENT AND DEMEANOR (36)

Superior branchpoint: Classroom presentation ability (3)

Criteria: To inspire, motivate  
To exemplify appealing attributes, traits, characteristics  
To present a learning demeanor  
To create a learning environment

Examples: "Showmanship"  
"Personality"  
"Enthusiasm"  
"Honesty"  
"Blackboard techniques"  
"He made me want to learn."  
"He talks too much."  
"He always tries to prove how smart he is."  
"Narrowminded"  
"Rapport"

INSTRUCTION/DECISION  
"YES" log category 36  
"NO" reject



Branchpoint label: EFFORT OUTSIDE CLASS (4)

Subordinate categories: To prepare (41)  
To be available (42)  
To evaluate students (43)  
To organize course (44)

Criteria: Instructor responsibilities characteristically performed outside  
of the classroom  
All references to grades, examinations, evaluation of students,  
and "taxingness" of work  
Relevance and clarity of course objectives and requirements  
Emphasis and relevance of course material  
General remarks concerning organization  
Preparation of material for classroom presentation

INSTRUCTION/DECISION

"YES" go to page 17

"NO" go to page 21



Entry from page 16

PAGE 17

Category: TO PREPARE (41)

Superior branchpoint: Effort outside class (4)

Criteria: Instructor preparedness for lectures

Examples: Usually recognized by word "prepare"

INSTRUCTION/DECISION

"YES" log category 41

"NO" go to page 18





Category: TO BE AVAILABLE (42)

Superior branchpoint: Effort outside class (4)

Criteria: Offering outside assistance  
Being available for help  
Readiness to assist

INSTRUCTION/DECISION  
"YES" log category 42  
"NO" go to page 19



Category: TO EVALUATE STUDENTS (43)

Superior branchpoint: Effort outside class (4)

Criteria: Content and composition of examinations  
Fairness grading examinations  
"Taxingness" of work  
Grading scheme, including emphasis or pressure on grades  
Reading submitted assignments  
Promptness in returning examinations

INSTRUCTION/DECISION  
"YES" log category 43  
"NO" go to page 20



Category: TO ORGANIZE COURSE (44)

Superior branchpoint: Effort outside class (4)

Criteria: Cohesiveness of course  
Clarity of course objectives and requirements  
Separation of important material from less important  
Orientation of course: Theory versus Practical  
Relevance to real world  
Relevance of assignments to objectives  
General comments concerning organization  
Tendency of course material to be a unit

INSTRUCTION/DECISION  
"YES" log category 44  
"NO" reject



Branchpoint label: LEARNING RESULT (5)

Subordinate category: Competence gain (51)

Criteria: Explicit statement of satisfaction as a result of the amount learned, skill acquired, competence gained, a learning experience, or understanding obtained.  
Does not include comments which associate resultant understanding with another instructor attribute.

INSTRUCTION/DECISION

"YES" go to page 22

"NO" reject





Category: COMPETENCE GAIN (51)

Superior branchpoint: Learning result (5)

Criteria: The criteria for this category are the same as those for the branchpoint. Has the thought been captured?

INSTRUCTION/DECISION

"YES" log category 51

"NO" reject



## APPENDIX C

### STUDENT PERCEPTIONS OF INSTRUCTOR EFFECTIVENESS

Different openings for this discussion of students' perception of teachers have been pondered, like " . . . what you've always wanted to know about students' perceptions but were afraid to ask . . ." or, " . . . just one hour toward a more tantalizing teaching image . . ." or, perhaps, " . . . how to be one up on your colleagues on student opinion of teaching questionnaires at NPS . . ." However, any of these statements might be considered rather cheeky. It seems better to dispense with the statements and the discussion, and bore in "on the facts;" here they are.

In an attempt to clarify the factors of instructor effectiveness as perceived by students a survey was conducted in January 1973. All Naval Postgraduate School students were asked to respond to two questions:

1. Think of a time when you were particularly satisfied with an instructor. What led up to this feeling?
2. Think of a time when you were not satisfied with an instructor. What led up to this feeling?

Student responses were categorized according to content in an effort to group similar answers. Once these categories were developed, it was envisioned that a vehicle could be developed in which routine feedback to instructors could be provided. Secondly, a more general feedback could be obtained if the kinds of responses received to the questionnaire in January were made available. These pages seek to make that general kind of feedback available.

The effort to group responses such that a large number of student perceptions could be coherently expressed resulted in sixteen categories. Although the development of these categories was the major effort associated



with the survey, the verbatim student responses to the questionnaire are provided here to illustrate the kind of comments received. Several predominant themes seem to underlie these responses.

A. Either implicitly or explicitly stated, student understanding of course material, or facilitation of student comprehension seemed to be the bases upon which satisfaction or dissatisfaction were expressed. Particular attitudes or actions on the part of the instructor were most frequently singled out because of the contribution they were felt to make to student understanding.

B. There seemed to be an overwhelming student emphasis on organization of the course and classroom presentation. This emphasis was manifested in comments concerning organization of the course, organization of the classroom presentation, and prior preparation, which, for purposes of this study, were categorized separately. Student experience in a military environment may play some part in this emphasis.

C. Each of the categories was associated about as frequently with student satisfaction as with student dissatisfaction.

D. As might be expected, comments associating satisfaction or dissatisfaction with the evaluation of students by instructors were frequently noted. Further subdivision of this category of responses indicated that a main issue in the students' minds was the content of examinations, i.e., appropriateness of material, difficulty, length, etc..

E. The categories and verbatim responses that follow are presented in order of their frequency of mention.



1. Course organization
2. Instructor evaluation of student
3. Instructor attitude toward student understanding
4. Ability to create learning environment/demeanor
5. Instruction preparation
6. Clarity of explanation
7. Instructor knowledge
8. Ability to teach at appropriate level
9. Instructor attitude toward course
10. Lecture organization
11. Instructor attitude toward student
12. Instructor attitude toward questions
13. Student competence gain
14. Instructor control of class time
15. Instructor availability
16. Ability to evoke interest

While the categories might be expected to reflect the factors students perceive as being associated with effectiveness or ineffectiveness of teaching in any sample, one would not necessarily expect the ranking to remain the same in another sample, say at another school, or, at another time. For purposes of illustration, the context of student remarks has often been included below even though the surrounding context might have otherwise fit into another category during the classification procedure. Verbatim student comments follow.





## ORGANIZATION OF THE COURSE

Courses where the student must grope for what the course is to cover because the instructor has failed to structure an outline to conform with the catalogue; i.e., the instructor seems to lecture on whatever strikes his fancy, no course outline prepared, avoids questions related to course content.

Provided the student with an overview of what he was trying to teach, its place in the overall discipline, the importance or reasons for studying it, and its applications.

He clearly defined the course and what was expected in the way of homework, tests, papers, etc., from the outset.

An outline of the course was presented, at the beginning, with things that resembled course objectives. The material seemed pertinent to our total field of study. Reasonable assignments were given that reinforced and complimented classroom work.

Disorganization--skipping around from section to section in a text during the lecture and then from lecture to lecture, without stating where lecture material is coming from and without providing daily homework assignments to either supplement the previous day's lecture or prepare for the next one.

The material was taught from a practical point of view rather than a series of mental gymnastic exercises. The Prof had some idea about how the subject might be applicable to the Navy.

He knew what he wanted to teach and the procedures by which he wanted to achieve his goal. He indicated he knew the good and bad points about the text and had additional material for the parts where it was needed.

## EVALUATION OF STUDENTS

The student was well informed from the beginning exactly what was expected from him--and the instructor followed through by evaluating the student on those expectations.

His exams reflected the material presented. His grading was fair and impartial.

Tests, projects which gave an objective evaluation of my performance. This does not necessarily mean tests which were graded favorably.

He was demanding in time and effort and his exams required a comprehensive knowledge.



Homework assignments were meaningful additions to his classroom presentation and the book, and not just busy work.

Testing on what appears to be insignificant matters not covered by text or lecture in any degree of detail.

Grading: either arbitrarily easy (i.e., much partial credit for obviously incorrect work, apparently in an attempt to camouflage poor instruction,) or arbitrarily hard or inconsistent, and a supercurve.

Examinations that were made to test the material as the student would be later using it vice emphasizing regurgitation.

✓ Made many mistakes on the board while doing problems yet expected each answer to be exactly correct on exams.

By appearing "hard" all quarter he managed to completely kill interest in the subject matter and then award all his students with A's and B's --not indicative of levels of learning at all.

#### INSTRUCTOR ATTITUDE TOWARD STUDENT UNDERSTANDING

The instructor displayed, and held, a genuine positive interest in the students' progress in obtaining an understanding and knowledge of the subject material which he knew would be essential to the successful completion of follow-on course. Through individual instruction, required problems, and frequent quizzes he monitored individual progress and was able to immediately spot any trouble spots.

Positive { My belief that the instructor really cared whether or not the student understood the subject matter. He slowed down, repeated, answered the "stupid" questions until the student really did understand the subject. He gave the impression that he was happy to spend extra time with the student to insure the student learned.

His sincere interest in imparting knowledge to his students vice just presenting material to meet the requirements of the curriculum. His goal for his students was understanding not memorization.

A desire to see the student learn and understand material that is presented, rather than to keep moving ahead just to remain "on schedule" and heck with understanding the material.

He was interested only in ending the period and meeting requirements. He didn't really care if the students learned.

. . . just "fulfilling his duty" by covering the topics instead of trying to teach us something.

The real key to his success was that he was sincerely interested in the students understanding the material and made great efforts both inside and outside of class to insure this goal was achieved.



When I was able to determine that the professor's goal was to teach each and every individual in the class; via extra help sessions, office hours that were realistic, personal attitude, and receptivity.

He realized his main function was instructing not research, writing papers, or writing a book.

#### INSTRUCTOR ABILITY TO CREATE A LEARNING ENVIRONMENT AND DEMEANOR

He always maintained a good humor, inserting personal examples of trying times he himself experienced so that the student was never made to feel stupid, ignorant, or thick. This rapport created a "learning atmosphere" highly conducive to education.

The course was a required introductory course but completely unrelated to my major. My initial feelings were of the necessary evil, let's get it over with. About the middle of the quarter I discovered a keen interest in the subject had been kindled by the instructor and I wanted very much to pursue the subject. This kindling was done by the instructor's use of personal experiences of about 20 years in the application of the discipline. He took abstract theory and made it live.

He talked loudly enough so the whole class could hear. His board work was legible and clearly organized. He went slowly enough so that we had time to take notes and listen to the presentation. Handouts were used as an aid to understanding.

The instructor's enthusiasm for the material being taught coupled with a genuine concern that the students were learning the material.

Refusal to admit that he didn't know a point and failure to provide the information at a subsequent class session.

A course in which my major concentration seemed to focus on the distracting mannerisms of the instructor. Rather than listening to what he said, I found myself counting the number of "ah's" and "it happens to be's" . . . unfortunately, these were not testable and my final mark was an indication of what I had concentrated on.

His ability to take a dry, methodical subject and by giving sidelights as to the utility of the subject in wide areas, make the course an enjoyable experience.

He was not constantly trying to prove how smart he was.

#### INSTRUCTOR PREPARATION

He was totally prepared for each lecture; i.e., examples were worked out in advance, homework problems were worked by the instructor prior to assignment (thereby avoiding lengthy exercises of questionable worth), student difficulties and questions were anticipated.





Trying to bullshit his way through class without having so much as read the assigned text.

He simply didn't spend the necessary time to prepare his lectures in a manner that would enable the student to grasp the lecture material presented.

Instructor totally prepared--pointed out problem areas before encountered.

His continual confusion of basic principles due to lack of preparation.

When the instructor spent 45 minutes of the classroom time working a homework problem and still didn't solve it. He was unprepared.

Instructor assigned a problem for specific class period. On the day assigned, the instructor was not prepared to discuss the problem. He evaded direct questions and kept jumping to new material. The instructor asked for a consensus of opinion on the part of the students what "the most popular answer" was.

The overwhelming emphasis on presenting material vice imparting knowledge. I am sure all my instructors possess a thorough knowledge in their fields. However, the majority lack in their ability to impart that knowledge.

#### CLARITY OF EXPLANATION

Outstanding lecture presentation that was clear, concise, and to the point. Most of all, his orderly manner of presentation from point A to point B and then a summary of high points during the last minutes of class.

Most importantly, he presented the material in a manner that enabled me to understand a subject I had previously found very difficult.

His willingness to offer complete explanation of classroom material when he could and his open admission that he couldn't when he couldn't.

He could really get difficult concepts across to the class even if several different types of explanations were needed. He didn't leave anyone hanging.

He was unclear, vague and often changed his position on statements. One never knew for sure if his class notes were correct or complete or even applicable.

His ability to draw on previous knowledge of the class to illustrate his points.

He never finished explaining anything that he started. His tests appeared to be some of the things that he started to explain but never finished.





He has a way of saying things simply, and relating them to things I'm familiar with.

He could explain homework problems clearly. He illustrated high points with examples other than those read for homework.

He acted self-satisfied, smug, and spouted a lot of jargon. He explained things I already knew, yet he managed to make them sound hopelessly complicated.

#### INSTRUCTOR KNOWLEDGE

The instructor not only knew the texts well, and could quote directly and accurately from them, but he had just completed several years in the course environment. He had an opportunity to get a good comprehensive view of his subject. HE WAS CURRENT.

The feeling that the instructor knew what he was talking about and not merely reading out of the text. He could expand on what was in the text because of experience and competency.

Intimate and unshakable knowledge of the area he was teaching.

It was obvious that the teacher had no current exposure of real world problems, just the academic approach.

INCOMPETENCE! e.g., a professor who can't do a problem on the board when the majority of the class can do it because they took the effort to read the pertinent section in the text.

A feeling the instructor didn't know the material any better than I did.

The instructor lived in an academic vacuum with no idea how his course should or could relate to the world of a Naval Officer.

A demonstrated inability in the area of instruction such as constant errors working sample problems.

Instructor unsure of the material. He became extremely nervous when asked questions. His extemporaneous ramblings left me cold.

Assigned work without having done it himself--consequently embarrassed when asked to do a problem and was not able to.

#### INSTRUCTOR ABILITY TO TEACH AT APPROPRIATE LEVEL AND PACE

He first established a common base of knowledge within the class. Even though he had to go back to a somewhat elementary level, the class was then with him all the way, and progress was very rapid and real.



Emphasis on getting the material covered vice teaching.

The instructor did not move on to new material until he was satisfied everyone in the class understood.

His ability to identify how well the class was understanding the material he was teaching.

He would tell us over and over how important it was to keep moving whether we understood the previous material or not.

The instructor lectured at a level consistent with his background and expertise, but right over the heads of many in the class.

He felt compelled to stick to a daily routine, even if it meant covering an extraordinary amount of difficult material in one or two days.

He gloried in presenting abstract mathematical theories and persisted even though it should have been obvious that he had lost 80 - 90% of the class.

The instructors did not draw on my previous knowledge, and taught below my level of intelligence.

He spoke on my level, even though the material was over my head.

The instructor had no feeling of how well the class was progressing and continuously glossed over information which the class is not understanding.

Did not appear to be interested or aware that many students were failing to grasp important concepts of the course.

#### INSTRUCTOR ATTITUDE TOWARD COURSE AND SUBJECT

He failed to exhibit any enthusiasm in the basic course he was teaching and just "showed up" for each class.

He was quite proud of his field, and, as a result, his students did not feel they were learning something irrelevant in the real life world. The Prof consistently related his topics to Navy-oriented problems.

He was interested in his subject and projected this interest to me.

I felt the instructor wasn't interested in what he was teaching. He seemed to have other things on his mind besides the class. He knew the material but couldn't teach.

He acted like he was enjoying himself. He was full of his subject.



When the professor commenced the course with an apology for having to teach the course and for the students having to take the course.

He was continually downgrading the importance of the subject.

#### ORGANIZATION OF LECTURE MATERIAL

He was organized. He explained things from beginning to end in a logical step-by-step process so that nothing was skipped and no doubts remained.

The lectures were well organized and the presentation was held to the subject matter and the session not allowed to ramble or wander.

The instructor obviously had it all together. I felt that he knew much more about the subject but was giving us the cream of what he knew in a well organized and clear fashion. (Not designed to snow students but to instruct them.)

The instructor was disorganized and would often drift off the pertinent subject matter. So much so that with two weeks left in the course we had five weeks worth of important valuable material to cover. You can guess the result.

Erratic, broken lectures resulting from inadequate organization.

He presented the material in a manner such that the relevant material was stressed and nice to know material was not stressed so much.

The instructor had a brilliant mind and a deep knowledge of the subject. But his presentations were so unorganized, his chalkboard work so jumpy from place to place, and his ability to orally communicate so limited (he would stop in mid-sentence to interject another thought and never return to the subject at hand) that he succeeded only in confusing the student.

He continually went on unimportant tangents in lectures.

#### INSTRUCTOR ATTITUDE TOWARD STUDENT

The instructor treated me as an expert in my own field of Naval Affairs and related to me as an individual well into my own career.

Instructor's attitude toward students, i.e., was respectful of their opinions and questions.

Making the student feel stupid: "That's so trivial I can't spend time on that."





Talking down to the students when most of the class had more practical experience in the matter than the professor.

He spent time with students rather than research. He took a personal interest in each student in the class.

Talking down to the class.

#### INSTRUCTOR ATTITUDE TOWARD STUDENT QUESTIONS AND CONTENT OF STUDENT UNDERSTANDING

He stressed important points which we could expect to see in higher level studies and was concerned with building good foundations.

He fielded questions without making the student feel like an idiot for asking the question.

Questions raised merely brought attacks on the questioner as to the student's inability to handle the particular problem.

Never-mind-how-it-works-just-plug-in-the-numbers type attitude.

He became upset, even angry, if students questioned his methods.

The instructor was concerned about concepts and understanding them rather than overwhelming students with insignificant dates and unrelated facts.

His complete disregard for the questions that were asked and his failure to answer them.

#### STUDENT COMPETENCE GAIN

My most vivid recollection of instructor satisfaction was after the completion of a particular course. On reflection, I realized that the instructor had given us a conceptual approach to problem solving rather than a mechanical "plug and chug" approach that is common to the majority of such classes.

I felt at the conclusion of the course that I had learned something and that it was useful.

Satisfaction is coupled with the feeling that something is being obtained from the course.

When, after six months, you can't remember anything about the course . . .

We finished no smarter than when we started.





A feeling of competence in the subject after the course.

Most of the information I gained from this course was on my own from reading and outside help from friends. I felt I could have missed 75% of the class meetings and learned as much.

#### INSTRUCTOR ABILITY TO CONTROL CLASS TIME

The effectiveness he demonstrated in encouraging class participation.

He did not try to cram 80 minutes of lecture in a 50 minute time frame. He left time to clear up on-the-spot questions.

Wasted no time. If he didn't have any more lecture material, he stopped lecturing and class was over.

#### INSTRUCTOR AVAILABILITY

He was never too busy to talk to a student and did not give the appearance of being bothered or held up--in fact, he seemed to like to talk to you if you went to see him with a question.

He was available for consultation at almost anytime outside class, rather than only during office hours.

He was available at any time to go over difficult areas with students.

If it was good golf weather his door was locked. If the weather was poor, it was closed. He kept us informed of his scores.

#### INSTRUCTOR ABILITY TO EVOKE INTEREST

The instructor assigned readings from the required text and then every lecture hour repeated, often verbatim, the material from the text. It is difficult to listen to an instructor re-read to you for an hour the material you read the night before.

He made his presentations interesting, if not downright entertaining, by keeping them relevant, by using real world situations as examples, and by a highly developed sense of humor.

Attempt on part of the instructor to make even the most unappealing part of the course interesting.

Taught from lesson plans and book. Instructor knew equation and figure numbers "by heart" . . . he had taught the course so many times it had very little appeal.

He used interesting examples to illustrate his topic.



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<p>The thesis investigates the determinants of effective and ineffective "instructorship" as perceived by students at the Naval Postgraduate School. Through a critical incident survey and subsequent content analysis a scheme which can express student perceptions of effective instructorship was developed. Categorization of good and bad instructorship incidents isolated sixteen factors which were found to be determinants of student perceptions. Examples of verbatim student comments are included in the form of a general feedback vehicle appropriate for instructor consideration.</p>			





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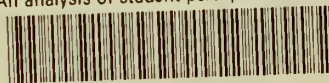
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